

Date: Thursday, 3/8/2007 3:41:01 PM  
User: Kim Johnston

# Process Sheet



Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: GAS SPRING - UNDER REVIEW
Job Number	: 31149		
Estimate Number	: 12702		
P.O. Number	: N/A	Part Number	: D35527
This Issue	: 3/8/2007	Drawing Number	: D3552 UNDER REVIEW
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: N/A	Drawing Revision	: B
Previous Run	: 30638	Material	: N/A
		Due Date	: 3/30/2007
Written By	:	Qty:	20
Checked & Approved By	:	Um:	Each
Comment	: Est Rev: A New Issue 06-11-13 EC		

OK Rev. B. AS  
REV. C. will ADD  
NEW GAS SPRING  
P.W.  
3/8/07

Additional Product

Job Number: 

Seq. #:	Machine Or Operation:	Description :
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1.0	PG	PURCHASING
		

Comment: Issue P/O: 3276  
Purchase Part Number: B8-220-530-70N  
Supplier: LS Technologies  
Certificate of conformity is required

C 07103112 (20)


2.0	B822053070N	CARBON STEEL GAS SPRING
		

Comment: Qty.: 1.0000 Each(s)/Unit Total : 20.0000 Each(s)  
CARBON STEEL GAS SPRING

3.0	PACKAGING 1	PACKAGING RESOURCE #1
		

Comment: PACKAGING RESOURCE #1  
Receive & Inspect For Transit Damage  
Ensure certificate of conformity is attached



07/03/22 (20)

4.0	QC6	DIMENSIONAL CHECK
		

Comment: DIMENSIONAL CHECK

070328 (20)

Test for correct pressure

5.0	PACKAGING 1	PACKAGING RESOURCE #1
		

Comment: PACKAGING RESOURCE #1  
Identify and Stock  
Location: \_\_\_\_\_

07/13/30 (20)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: D Date: 01/04/04  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Thursday, 3/8/2007 3:41:01 PM  
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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: GAS SPRING - UNDER REVIEW

Job Number: 31149

Part Number: D35527

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC21

FINAL INSPECTION/W/O RELEASE



(20)

Comment: FINAL INSPECTION/W/O RELEASE

1907/04/04

Job Completion



q 17.04.04

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



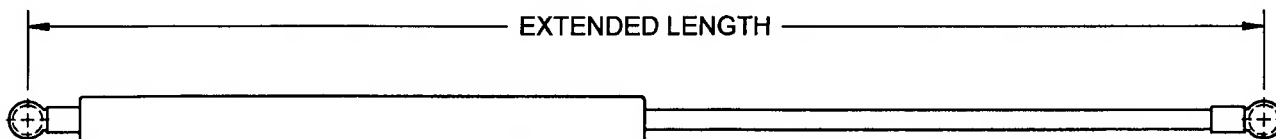
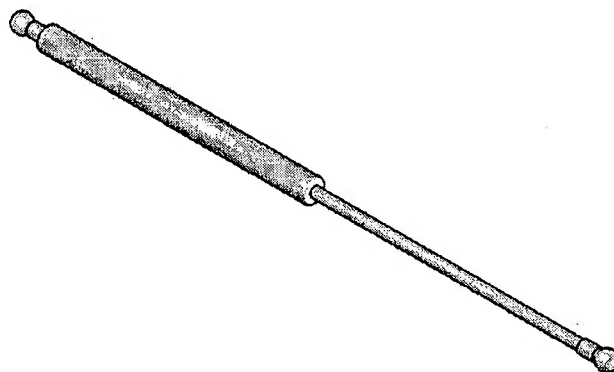
DESIGN <i>LE</i>	DRAWN BY <i>LE</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>PH</i>	APPROVED <i>[Signature]</i>	DRAWING NO. <b>D3552</b>	REV. B SHEET 1 OF 1
DATE <b>06.09.15</b>		TITLE <b>GAS SPRING</b> SCALE 1:1	
REV	DATE	DESCRIPTION	
A	06.09.15	NEW ISSUE	
B	06.10.24	ADD D-3552-7/-9; UPDATE DESC. D3552-1/-3/-5	

## SPECIFICATION CONTROL DRAWING

**UNDER REVIEW**

*0102203*  
*ADD D-3552-7/-9; UPDATE DESC. D3552-1/-3/-5*

DART P/N	STROKE (mm)	EXTENDED LENGTH (mm)	FORCE (N)	END FITTING	MATERIAL	LS TECHNOLOGIES P/N
D3552-1	220	530	70	10 mm SS BALL SOCKET	CARBON STEEL	C8-220-530-70N
D3552-3	200	490	200	10 mm SS BALL SOCKET	CARBON STEEL	C8-200-490-200N
D3552-5	175	430	150	10 mm SS BALL SOCKET	CARBON STEEL	C8-175-430-150N
D3552-7	220	530	70	10 mm NYLON BALL SOCKET	CARBON STEEL	B8-220-530-70N
D3552-9	200	490	200	10 mm NYLON BALL SOCKET	CARBON STEEL	B8-200-490-200N



**D3552-X GAS SPRING**

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. *31149*

**RELEASED**  
*06.12.22*

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## Certificate of Compliance

This is to certify that the merchandise listed below meets specifications as required by your order.

**B8-220-530-70N CARBON STEEL GAS SPRING**

**This product is ROHS compliant**

**We certify no mercury was used in the manufacture of this order.**

Order # PO00003276

LS Technologies Inv # 3569

A handwritten signature in black ink, consisting of a large, stylized 'L' followed by a series of loops and a long horizontal stroke.



L S Technologies Inc Canada

A handwritten signature in black ink, consisting of a large, stylized 'L' followed by a series of loops and a long horizontal stroke.

Nolan Fehr

LS Technologies Canada Inc.

Box 25032  
Saskatoon, SK  
S7K 8B7

# Packing Slip

Date	Packing Slip #
3/16/2007	3569

Name / Address
Dart Aerospace Ltd 1270 Aberdeen St. Hawkesbury, ON K6A 1K7 Canada

Ship To
Dart Aerospace Ltd 1270 Aberdeen St. Hawkesbury, ON K6A 1K7 Canada

P.O. No.	Rep	Ship Date	Ship Via
00003276	Nolan	3/16/2007	Purolator

Qty	Description
20	B8-220-530-70N Carbon Steel Gas Spring
	Shipping and Handling PUROLATOR / DHL - Tracking #320331424939
	Total GST Business Number: 875007718
Please remit to above address. Thank you for the business.	

## Jason Murdoch

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**From:** Marc Bellavance [mbellavance@dartaero.com]  
**Sent:** Tuesday, March 27, 2007 10:03 AM  
**To:** 'Jason Murdoch'  
**Subject:** RE: D3552-7

I don't believe that adding the Newton to Pound-Force conversion is a good enough reason for us to revise the drawing, as a simple calculation can do the job.  
To convert your metric 70N to imperial pound-force, all you need to do is divide the amount of Newton by 4.488:  
For example,  $70\text{N} \div 4.488 = 15.59\text{ lb}$ .  
Anyways, the drawing will soon be revised by me to add D3552-11 to the table.  
So I'm taking your recommendation in consideration.

**Marc Bellavance**  
**Mechanical Designer**

**DART** aerospace Ltd.

Tel: 613-632-5200 Ext. 240  
Fax: 613-632-9311  
E-mail: [mbellavance@dartaero.com](mailto:mbellavance@dartaero.com)  
Web: [www.dartaero.com](http://www.dartaero.com)

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**From:** Jason Murdoch [mailto:jmurdoch@dartaero.com]  
**Sent:** Tuesday, March 27, 2007 9:50 AM  
**To:** 'Marc Bellavance'  
**Subject:** RE: D3552-7

yes

[jmurdoch@dartaero.com](mailto:jmurdoch@dartaero.com)  
Q.C. COORDINATOR

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**From:** Marc Bellavance [mailto:mbellavance@dartaero.com]  
**Sent:** Tuesday, March 27, 2007 9:49 AM  
**To:** 'Jason Murdoch'  
**Subject:** RE: D3552-7

Jason,

Are you measuring the force of each gas spring when you perform your inspection?

**Marc Bellavance**  
**Mechanical Designer**

**DART** aerospace Ltd.

Tel: 613-632-5200 Ext. 240  
Fax: 613-632-9311  
E-mail: [mbellavance@dartaero.com](mailto:mbellavance@dartaero.com)  
Web: [www.dartaero.com](http://www.dartaero.com)

3/27/2007



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**From:** Jason Murdoch [mailto:jmurdoch@dartaero.com]  
**Sent:** Tuesday, March 27, 2007 9:17 AM  
**To:** 'Marc Bellavance'  
**Subject:** D3552-7

How much is 70( N ) force in pounds? I think this should be added to the dwg for inspection.

jmurdoch@dartaero.com  
Q.C. COORDINATOR

3/27/2007